

- to identify the appropriate databases to search to verify third number billing attempts
- accessing Line Information Database ("LIDB") information to determine call blocking and third number verification.

Assuming that, generally, the billing elements for local, toll and access calls will remain unchanged in a ported environment, the billing system will require extensive modification to compensate for the loss of the the industry will need ~~to decide~~, how to handle the

transmission and passing of billing records between providers. When location portability is factored in, even if this is only location portability for the new entrants, many other issues and impacts are added. At the least, additional information will be required for calls involving ported numbers to define the location of the calling and called party. The best approach has yet to be defined but it is clear that a fundamental reworking of the various systems and industry standards involved will be necessary.

CMRS providers will be doubly impacted by number portability. Wireless providers will be forced to amend the rating and billing systems which enable them to continue to interact as necessary with the wireline networks. Because

wireless providers do not use wireline based rating or billing systems, these CMRS-specific functions must also be amended. Hopefully these changes can be effected without impacting service currently rendered to wireless customers. It is important to note that if for some reason number portability implementation precedes the adoption of compatible architectures and message sets between and among wireline and wireless entities, roaming, detailed CMRS billing and advanced fraud detection could be rendered inoperable.

3. Operations Systems.

Embedded Operations Systems are predicated on the assumption that an NPA-NXX identifies a single switch with a specific, defined service area. With number portability this will no longer be the case. Telephone numbers are currently used as a customer identifier in repair centers, as a location identifier used for routing to work centers for dispatch activity, and as a test access number for loop testing. Number portability will significantly impact these functions and associated systems.

CMRS providers utilize their own operating, billing, rating, recording, and other systems that co-exist with, but are not the same as, wireline systems. Therefore, CMRS providers will have to both retain interconnectivity with wireline providers as well as to make dramatic changes to their systems to accommodate number portability demands.

CMRS-specific capabilities (fraud management, 911 routing ability, roaming, etc.) will also be adversely affected and carry an associated expense not similarly borne by wireline providers.

4. Operator Services.

Number portability has the potential of having a major impact on the provision of Operator Services. It is likely that operator services ("SS7") signaling with additional capabilities will be required for operator services systems ("OSS") so that operators can query the appropriate number portability routing data base for call disposition. This will be an additional expense.

Number portability has significant impacts on the current alternate billing services offerings. Today, when a calling card call is placed, a query is launched from the OSS to the appropriate LIDB based on the first 6 digits of the billing number. If the billing number is a portable number, this 6-Digit analysis will lead to the call possibly being routed to the incorrect Line Information Data Base ("LIDB") with incorrect billing and settlements resulting. This issue is similar to the TCAP issue with the CLASS services, which remains unresolved.

5. Number Administration.

Number administration will necessarily be implicated as portability continues to evolve. This will be particularly true if a great deal of churn develops within the industry.

The full deployment of a ubiquitous capability may ultimately lead to ten digit number administration on a mechanized basis as is done with 800 numbers today. Should this occur, appropriate administration guidelines will need to be developed.

It is generally agreed upon that some neutral third party will administer the SMS database, which is the repository of information that is downloaded to the routing databases. At some point, this neutral third party would become the number administrator for a portable NXX. Standards need to be developed on how this neutral third party is to pass information to service providers, and ensure security and privacy of administration in a fair and impartial manner. The INC should be instructed to begin development of these standards and guidelines in a timely manner. While the guidelines for the SMS 800 could be used as a starting point, significant modifications may need to be made since 800 calling is related to a particular service while number portability applies to plain old telephone service.

6. CPE Impacts.

Customers may desire to dial portable telephone numbers from public telephones. The signaling used by public telephones is specialized. "Smart" public telephones have programmed rating tables that may be affected by service

provider portability. The impact of number portability on public telephones has not been adequately addressed.

While number portability should be transparent to customer premises equipment ("CPE"), this area has not been tested. Number portability will impact existing telephone call accounting systems such as those used by universities, hotel and motels, "smart" public telephones, and other entities. These call accounting systems use their own call rating databases based on the NPA-NXX association with unique vertical and horizontal coordinates.

CMRS end users and their serving carriers face a unique CPE-related burden not paralleled by wireline end users. Any time a cellular end user changes service providers, even with number portability, the physical telephone set must still be altered to replace the System ID ("SID") of the old system provider with the SID of the new wireless carrier. This technical requirement adds significant cost for wireless carriers and inconvenience to wireless subscribers.

7. End User Feature Functionality.

Significant end user impacts have been identified during industry discussion on number portability. A very critical element is the impact on existing features. Consumers will expect that a number portability solution not have a negative impact on feature functionality. From the wireline perspective this could include CLASS features and recognition of local free vs. toll conventions. From the

CMRS perspective, roaming, automatic fraud prevention, and advance features, must continue to operate transparent to the end user.

It is of utmost importance that E911 not be adversely affected by number portability. The critical nature of the service and its widespread public acceptance make it imperative that the integrity of the system be maintained. Implementation of number portability must not be allowed to impair the reliability of this vital public lifeline. Thus the Commission is correct including that a number portability environment should support E911 services.¹⁵

Once a solution is implemented in a geographic area, its effects are necessarily felt by non-participants. For example, CMRS providers and their customers will be negatively impacted by the implementation of number portability even if they are not compelled to participate directly. When calls are made to a CMRS subscriber from a "ported" number, technical and billing issues are created in the CMRS network, regardless of the type of number portability plan in use. For example, some number portability solutions would cause a pseudo-number for the calling party to be sent to the CMRS network in place of the caller's original number. The CMRS subscriber would not recognize that number on his billing records or if displayed through a caller ID service. Customer confusion and billing

¹⁵ NPRM para 41.

complaints would result. Under other number portability solutions, roaming validation is affected when a CMRS subscriber whose number has been ported attempts to roam on visited systems.

The various proposals put forth to date have varying degrees of impact on these services. The industry must continue to have as an objective the crafting of a solution which maintains full feature functionality. BellSouth cannot support nor should the Commission endorse anything less. To do so would be a great disservice to consumers who use them and carriers which offer them.

8. Directory Impacts.

In a number portability environment, the current systems used to publish, bill, and deliver directories will become inadequate. Current standards for directory publications rely on the NPA/NXX to determine the appropriate directory in which to list a subscriber, the proper region of a city/state in which to publish listings and to distribute phone directories. These systems identify a particular telephone number with a physical, geographic location. Geographic areas are scoped into "communities of interest" (to aid in finding a restaurant on the north side of town, for example). With number portability this linkage is lost, and it makes it impossible to determine (by virtue of a telephone number alone) in which metro area directory a listing should be published. The impact which number

portability has on directory publishing industry should be considered by the FCC and respective industry forums before determining the final design of portability.

9. NPA Relief.

Some parties have argued that number portability will allow more efficient use of numbering resources and consequently could delay future NPA exhausts. Given the considerable impacts of providing NPA relief, such a result would be desirable. BellSouth believes this potential benefit should be considered by the industry in selecting a number portability solution.

IV. THE ROLE OF THE REGULATORS AND THE INDUSTRY

A. The FCC Should Oversee Industry Development and State Implementation of Number Portability Solutions to Ensure that Overriding National Public Interest Goals are Not Frustrated.

The Commission should assume a leadership role in the development of a national number portability policy. In this role, the Commission should encourage the state commissions to implement remote call forwarding("RCF"), flexible direct inward dialing ("DID"), or variants of these approaches as interim service provider number portability solutions in order to facilitate competition in the local exchange market. At the same time, the Commission should direct the INC, or some other industry forum, to develop through the consensus process a long term solution that will accommodate any actual market demand for service provider,

service and location portability, and the affordable provision of those services by all segments of the industry.

BellSouth believes that industry efforts, described in Section IV. A. below, can be enhanced by greater Commission oversight. Although current efforts are likely to result in significant documentation on number portability, few, if any, specific recommendations are expected. The Industry Numbering Committee ("INC") should be specifically directed by the Commission to reach a consensus position and recommendation on certain technical and administrative issues surrounding number portability. Moreover the INC should identify the issues which must be collectively resolved and manage the resolution of those issues through various Alliance for Telecommunications Industry Solution ("ATIS") subcommittees and their processes. These include the following:

- Identification of those issues requiring national agreement and those which can be driven at the state level.
- Consensus view on the identified national issues such as that of a protocol standard.
- A specific recommendation on how to select an administrative database owner(s).
- Elements of an implementation timeline.
- Development of a transition plan (e.g. communication maintenance, etc.).

The Commission should further ensure that industry efforts address issues unique to CMRS in order to allow CMRS to participate to the fullest extent possible and take full advantage of portability without losing any of the consumer features available today.

As the industry works the myriad of issues associated with number portability, the Commission should prevent any state from adopting a long term number portability solution in advance of any industry derived solution. FCC oversight is necessary to ensure that state action does not create the situation where some or all carriers must essentially pay twice for number portability deployment. If the industry identifies a long term solution which is incompatible with or effectively replaces these state specific plans, this situation could indeed occur. For example, in letters from NYNEX and Rochester Telephone to the New York Public Service Commission, these carriers reported respective costs of \$1.5 million to establish service and \$8.24 per subscriber per month to effect a number portability trial in that state. Should a second number portability implementation occur, which is likely, unknown but discrete additive costs will again be incurred. Some states have formally expressed their intention to implement long term number portability as early as the fourth quarter of 1996. However, BellSouth agrees with the Florida Public Service Commission staff recommendation that the FCC "assume a leadership role with

input from the states developing a permanent national solution".

Should these state implementations proceed, it is probable that they will precede federal action. Affected carriers who have complied with state number portability requirements may then have to bear the cost of modifying these state-specific architectures to support the federal solution. This scenario is exacerbated for CMRS providers whose service areas cover multiple states.¹⁶

In addition, the Commission should establish guidelines for the treatment of CMRS under interim service number portability plans. At a minimum, such guidelines should provide that CMRS providers are not required to participate in interim service provider number portability arrangements unless it has been demonstrated in open proceedings that sufficient demand for such portability exists between CMRS-wireline and/or CMRS-CMRS to justify the costs of implementation or the competitive benefits and that any state implemented plan will not negatively impact CMRS providers' ability to continue service to existing customers or delay the offering of new services, such as

¹⁶ For example, the PCS license for MTA #6 covers portions of three states. BellSouth Personal Communications, Inc. could, at some date, be required to implement as many as three different state number portability plans, each developed in separate procedures and with potentially conflicting requirements, all within a single PCS network.

vertical/value added services or PCS. The impacts of number portability on the wireless industry as described herein demonstrate that active assertion of federal jurisdiction is consistent with the Commission's goal of fostering rapid nationwide development of wireless services.

By the Commission's redirection of the focus of the INC as discussed above, BellSouth believes the industry's work on drafting a long term number portability solution can be expedited. This approach will also place the Commission in a more active role in the development of number portability standards. A more proactive role by the Commission will assist in the development of and compliance with these standards.

B. The States Should Determine When Portability Capabilities are Deployed.

The Commission recognizes that several states are experimenting with various ways of addressing number portability and that state regulators have legitimate interests in the development of number portability. The Commission has also encouraged the continued testing and deployment of number portability measures at the state level.¹⁷ The Commission's leadership role in promoting a national number portability policy requires it to influence local efforts to ensure that state implementation of interim

¹⁷ NPRM para. 32.

solutions in the wireline local exchange wireline market do not conflict with the orderly development by the industry of a long term number portability solution that can accommodate all service providers, including CMRS.

In BellSouth's view, state regulation should play a key role in the deployment of a number portability capability. Specifically, the states should determine when permanent portability capabilities are deployed after the FCC and the industry determines the most appropriate long term solution. State regulators are in the best position to determine when market demand and competitive forces dictate the need for number portability in their jurisdictions. As noted below, BellSouth believes the states should be the primary determinant of interim number portability arrangements. Moreover, state proceedings on local competition and local number portability are proceeding well in advance of the ~~proceedings~~ valuable insight into future permanent solutions.

However, caution must be exercised to ensure that individual state efforts do not thwart national policy objectives for a uniform, national, efficient, and cost effective long term solution. Additional trials in individual states should have clearly defined objectives which provide new or unique insights into long term solutions. These insights, as the Florida PSC staff notes, should be communicated to the

Commission in its capacity as the leader in the development of a national number portability policy.

C. The Industry Should Play a Key Role in the Implementation of Number Portability and Should Receive Commission Direction as to the Tasks it Should Accomplish.

The Commission typically looks to industry bodies to develop technical and performance standards,¹⁸ and, as the stated above, the Commission should continue to do so within the context of number portability issues. BellSouth has expended considerable time and effort with its active participation in the Industry Numbering Committee ("INC") work efforts on number portability. BellSouth believes that the INC has made substantial and commendable progress in identifying both potential interim and long term solutions and should be encouraged to continue these efforts.

BellSouth believes the industry should play a significant and on-going role in the development of permanent number portability solution. It is our often stated view that the resolution of complex issues such as those associated with number portability are more effectively resolved by industry consensus mechanisms as opposed to a regulatory process.

As has been the history of the industry, the national forums under the auspices of the Alliance for

¹⁸ NPRM para. 34.

Telecommunications Industry Solutions (ATIS) have worked well towards resolution of many issues related to standard billing and provisioning. BellSouth believes that all who have worked with the issue of local number portability would agree that there are many issues, agreements and understandings which must be reached by the industry to ensure a seamless implementation for the consumers who will ultimately benefit. The forums and committees under ATIS are the appropriate place for resolution of these outstanding issues. As noted above, BellSouth believes the industry efforts will be enhanced by specific direction from the Commission on the appropriate tasks to be accomplished.

V. IMPLEMENTATION TIMEFRAME

- A. The Industry Must Carefully Analyze an Appropriate Implementation Timeframe and the Commission Should Refrain From Mandating a Date Certain.

It can be expected that the timeframe in which a long term number portability capability can be implemented will generate considerable industry debate. Estimates for a long term capability vary from as little as nine months to six years. Obviously, some detailed discussion on this subject is required to reconcile these disparate views. As BellSouth has noted, modifications to numerous areas will be required if all identified concerns are to be adequately addressed before implementation occurs.

BellSouth believes it will take the industry an estimated three to five years to deploy a system that adequately addresses all of these issues. Suggestions that this can occur in less than a year are without merit. An overlooked factor by many of those who advocate a database solution at the earliest possible date is that technical and administrative guidelines for the neutral third party administrator need to be developed. This process has not begun, but true number portability is not possible without a neutral third party administrator. SMS selection and deployment alone could take over a year. Industry participants who advocate a one to two year deployment have only focused on the routing aspect of number portability. While a method to route a call through the network can arguably be implemented in a relatively short timeframe, call routing, as BellSouth explains above, is only one piece of a very large puzzle.

Given this, BellSouth recommends that the industry give careful attention to developing an implementation checklist. This checklist should assist in ensuring that specific tasks (i.e., resolution of signaling protocol issues, development of functional specifications and administrative guidelines for the SMS system, etc.) for the implementation of portability are properly identified and accomplished.

Furthermore, this process should identify which tasks can be addressed in parallel and which must be addressed

serially. An examination of this nature should allow the industry to assist the Commission in accurately establishing a realistic timeframe for the implementation of long term number portability. The deployment of this capability will ultimately be driven by the deployment of competition in a given state and consequently will not be required initially on a ubiquitous basis. Given this approach, BellSouth does not believe that the Commission should adopt a date certain for number portability implementation.

VI. COSTS AND COST RECOVERY

- A. As a General Principle, the Costs of Number Portability Imposed by Regulation Should be Borne by the Cost Causes.

The costs of developing and implementing a permanent number portability solution will without question be significant. The Commission is therefore correct in attempting to establish a record of these costs to guide its future deliberations on this subject. Unfortunately, cost appears to be a secondary issue in some state number portability initiatives where it is only being considered after a number portability scenario is selected. To do so is analogous to a buyer selecting a car based solely on its looks and performance. While the buyer may select a car which meets all of his desires, he might not be able to afford to have all that he wants.

Cost recovery will be a significant issue during the discussions on number portability, particularly in regard to

a long term solution. Regardless of the architecture ultimately chosen to provide for number portability, costs as noted above are expected to be significant. Fundamentally, BellSouth believes that cost recovery mechanisms should be based upon a cost causer philosophy. Costs, both interim and long term, must be treated as exogenous insofar as they are triggered by regulatory action beyond the control of the carriers.

1. Interim Number Portability.

The Commission notes that some current cost recovery arrangements for interim number portability "arguably" places responsibility of paying the costs of remote call forwarding ("RCF") and flexible direct inward dialing ("flex DID") on the parties who directly benefit from these number portability services.¹⁹ This approach is more than arguable, it is sound, is consistent with BellSouth's fundamental philosophy described above and should be recognized by the Commission as the appropriate method of recovering the costs associated with interim number portability arrangements.

BellSouth believes that the rates for interim number portability arrangements should cover their long run incremental cost in addition to providing reasonable contribution to joint and common costs. It is expected that these rates will be considerably below the currently

¹⁹ NPRM para 56.

tariffed rates for these technical capabilities when provided as end user services. Nevertheless, BellSouth believes that current technical limitations, not rate levels, are the significant drivers with respect to the unsuitability of either RCF or flex DID as long term solutions to number portability. Therefore rate reductions, in and of themselves, will not make these arrangements more workable as long term solutions.

2. Long Term Solutions.

129. As BellSouth has previously noted herein, the development of a long term number portability solution is still in its infant stages. Consequently, it is premature to estimate the costs required to design, build and deploy a long term solution. Before these costs can be accurately estimated, some determination must be made as to the architecture which will be selected. These costs should be considered as the long term solution is developed.

VII. INTERIM NUMBER PORTABILITY

A. The Commission Should Allow State Regulatory Bodies to Implement Interim Service Provider Portability Solutions in the Wireline Local Exchange Service Market

The Commission has sought comment on various aspects of interim number portability arrangements.²⁰ In so doing, the Commission recognizes various measures which have been discussed and implemented within the industry. BellSouth does not believe these measures require further elaboration but would note that the definition of interim number portability should be related to the arrangements the Commission has described and not to a state implementation of a "long term" solution that may ultimately have to migrate to a uniform national solution. These arrangements are the use of remote call forwarding ("RCF") or flexible direct inward dialing ("DID") and, potentially, some modifications thereof.

Interim portability arrangements will be implemented in many states well before the FCC concludes this rulemaking. As an example, legislation in Florida requires that an interim number portability arrangement must be in place by January 1, 1996. With that requirement, affected carriers in Florida have met to reach a consensus on how interim portability will be provided (in this case the stipulated

²⁰ NPRM para. 55.

method was RCF).²¹ BellSouth believes that many other states will adopt similar requirements in any proceedings addressing development of a competitive local exchange environment.

Given the foregoing, BellSouth sees little value in detailed consideration of interim portability by the FCC. One area of potential benefit, however, relates to the possibility of improving these solutions to make them more desirable as long term solutions. As the Commission correctly notes, each of the interim solutions proposed to date has technical and other drawbacks. If these drawbacks can be minimized, or eliminated altogether, short term solutions may be sustainable for the long term and the costs associated with a database solution can be avoided. This issue is worthy of further study by the industry.

Conclusion


Where, as a matter of state and federal policy, local law mandates service provider portability in order to facilitate wireline competition in local exchange service, the Commission should forebear from interfering with state commission implementation of remote call forwarding, flexible inward direct dialing as their various interim service provider portability solutions. At the same time,

²¹ See Stipulation and Agreement, August 30, 1995, Florida Public Service Commission, Docket No. 95-737-TP, Investigation into a Temporary Local Telephone Number Portability Solution to Implement competition in Local Exchange Markets.

the Commission should direct the industry to develop, by consensus, long term portability solutions which do not preclude service and location portability, and which take into account the paramount interest of maintaining the quality and integrity of the nation's telecommunications infrastructure. States should be discouraged from implementing portability requirements for any class of telecommunications service provider that thwarts this goal. Standards must be developed that will allow all carriers to respond flexibly to market demand for portability services in a technically and economically feasible manner.

RESPECTFULLY SUBMITTED,


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September 13, 1995

CERTIFICATE OF SERVICE

I hereby certify that I have this 13th day of September, 1995 served all parties to this action with a copy of the foregoing ~~Comments~~ by placing a true and correct copy of the same in the United States Mail, postage prepaid, addressed to the parties listed below.


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